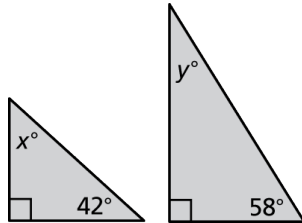


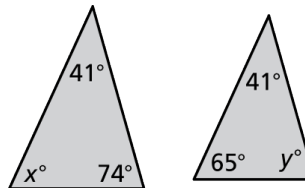
3.4 Practice A

Tell whether the triangles are similar. Explain.

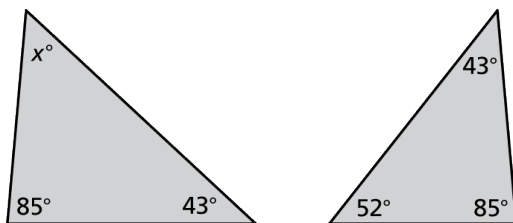
1.



2.



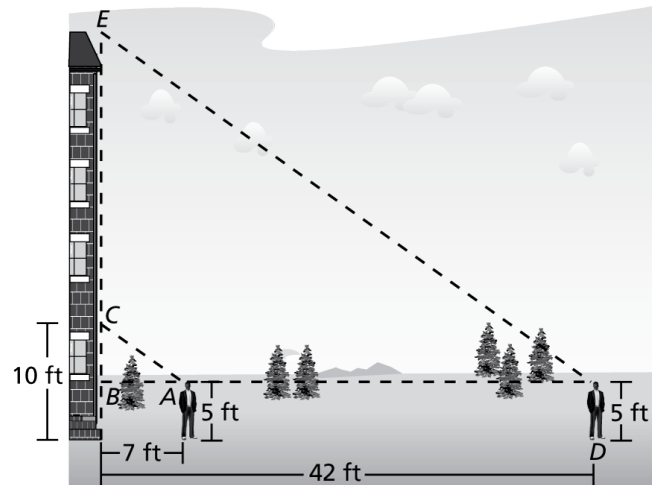
3. The triangles are similar. Find the value of x .



4. You can use indirect measurement to estimate the height of a building. First measure your distance from the base of the building and the distance from the ground to a point on the building that you are looking at. Maintaining the same angle of sight, move back until the top of the building is in your line of sight.

a. Explain why $\triangle ABC$ and $\triangle DBE$ are similar.

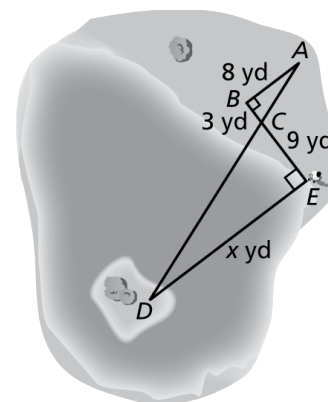
b. What is the height of the building?



5. You and your friend are practicing for a rowing competition and want to know how far it is to an island in the Indian River Lagoon. You take measurements on your side of the lagoon and make the drawing shown.

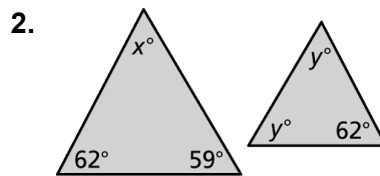
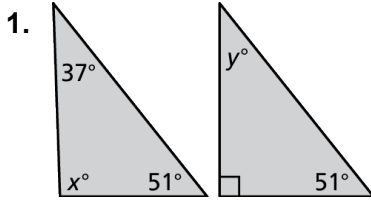
a. Explain why $\triangle ABC$ and $\triangle DEC$ are similar.

b. What is the distance to the island?



3.4 Practice B

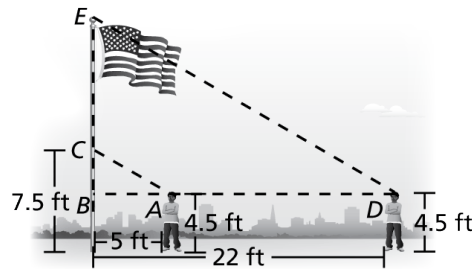
Tell whether the triangles are similar. Explain.



3. The triangles are similar. Find the value of x .



4. You can use indirect measurement to estimate the height of a flag pole. First measure your distance from the base of the flag pole and the distance from the ground to a point on the flag pole that you are looking at. Maintaining the same angle of sight, move back until the top of the flag pole is in your line of sight.



- Explain why $\triangle ABC$ and $\triangle DBE$ are similar.
- What is the height of the flag pole?

5. You are on a boat in the ocean, at Point A . You locate a lighthouse at Point D , beyond the line of sight of the marker at point C . You drive 0.2 mile west to Point B and then 0.1 mile south to Point C . You drive 0.3 mile more to arrive at Point E , which is due east of the lighthouse.

- Explain why $\triangle ABC$ and $\triangle DEC$ are similar.
- What is the distance from Point E to the lighthouse?

